

Instructions: Complete each of the following as practice.

1. Diagonalize each of the following matrices if possible. If impossible, explain why.

(a) $\begin{bmatrix} 0 & 2 & -\frac{29}{3} \\ 0 & 4 & 24 \\ 0 & 0 & -5 \end{bmatrix}$

(b) $\begin{bmatrix} 0 & 2 \\ 4 & 2 \end{bmatrix}$

(c) $\begin{bmatrix} 2 & 3 \\ 0 & -1 \end{bmatrix}$

(d) $\begin{bmatrix} 2 & 2 \\ 0 & 2 \end{bmatrix}$